

AMENDMENT

Serial Number: 10/733,780

Filing Date: December 11, 2003

Title: System and Method for Providing Event Hysteresis in Network Management Systems

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TCM127**REMARKS**

The Official Action mailed June 20, 2007 has been carefully considered. Reconsideration and allowance of the subject application, as amended, are respectfully requested.

Claim Amendments

Independent claims 1, 9, 17, 25 and 33 have been amended to more particularly recite that reporting the event as having the first or second state occurs “only after” the state is maintained for a “predetermined” amount of time, and that the event is reported as achieving the state “at the actual time of occurrence of a last state change” of the event. Support for these amendments may be found, for example, at page 7, lines 20-24. Applicants believe no new matter has been entered.

35 USC § 102

Claims 1-3, 5, 7-11, 13, 15-19, 21, 23-27, 29, 31-35, 37, 39 and 40 were rejected under 35 U.S.C. §102(b) as being anticipated by Golov et al. (U.S. Patent No 6,124,790, hereinafter “Golov”).

Independent claims 1, 9, 17, 25 and 33 have been amended to recite that reporting the event as having the first or second state occurs “only after” the state is maintained for a “predetermined” amount of time, and that the event is reported as achieving the state “at the actual time of occurrence of a last state change” of the event. As discussed at page 7, lines 20-25:

If the alarm state changes to cleared and remains cleared for at least a predetermined amount of time, i.e. the alarm stable time, the alarm is deemed stable and is reported 306 as cleared by the NMS. The alarm may be reported as cleared at the time of the last state change, i.e. not at the end of the alarm stable period, to provide accurate information as to when the alarm actually cleared.

Reporting the actual time of the last state change of an alarm can provide significant advantages compared to reporting an alarm change as occurring at the end of an “alarm stable

period.” For example, in a system as described at pages 8 and 9 of the specification wherein different alarm stable periods are set for different alarms, reporting at the end of an “alarm stable period” could result in inaccurate information concerning the relative time of occurrence for various alarms, thereby complicating fault diagnosis. Consistent with the claimed invention, however, fault diagnosis can be performed relative to the actual time that an alarm changes state, thereby maintaining the true relative time difference between alarm state changes and removing any complications associated with establishing a different “alarm stable period” for different alarms.

Golov is completely devoid of any teaching or suggestion of reporting a state of an event *“only after said [state] is maintained for said predetermined amount of time”*, “wherein said reporting ...comprises reporting said event as achieving said one of said first and second states at *the actual time of occurrence of a time associated with a last state change of said event*”, as set forth in independent claims 1, 9, 17, 25 and 33, and fails to recognize the attendant advantages. In fact, Golov appears to teach away from the claimed invention in suggesting that the alarm is reported as occurring at the end of a period of time determined by a specific “timer” associated with each alarm. *Col. 5, lines 26-65*. With reference to FIG. 4B, for example, it appears that the validated alarm is reported well after the alarm is actually cleared (as shown in FIG. 4A).

Golov also teaches an alarm integration process for use in a multi-tasking operating system, which allows a single timer to be used for multiple alarms. *See Col. 10, lines 7-14*. As illustrated in FIGS. 13 and 14 of Golov, the output (validated) alarm signal reaches a “high” state when the value of an integration variable X exceeds the value of a set threshold variable ST. The value of the integration variable X appears to depend, inter alia, upon the state of the input signal. *Col. 7, lines 45-59*. This certainly does not disclose, reporting a state of an event *“only after said [state] is maintained for said predetermined amount of time”*, as claimed.

Moreover, it seems that it is only possible to infer from the output signal the time (t_5 in FIG. 13; t_2 in FIG. 14) at which the value of X exceeded that of ST. In other words, it does not appear possible to infer from the output signal the original time of occurrence of a last state change (t_8 in FIG 13; just after t_3 in FIG. 14) since an identical output signal could result from two similar input signals. Applicants, therefore, find nothing in Golov that teaches or suggests

reporting a state of an event “only after said [state] is maintained for said predetermined amount of time”, “wherein said reporting ...comprises reporting said event as achieving said one of said first and second states at *the actual time of occurrence of a time associated with a last state change of said event*”, as claimed.

Independent claims 1, 9, 17, 25 and 33 thus include limitations that are not taught or suggested by Golov. As such, Golov does not anticipate the pending independent claims. Claims, 2-3, 5, 7-8, 10, 11, 13, 15, 16, 18, 19, 21, 23, 24, 26, 27, 29, 31, 32, 34, 35, 37, 39 and 40 depend directly or ultimately from claims 1, 9, 17, 25 and 33, and are not anticipated by Golov by virtue of the dependency, as well as for their own limitations.

For example, Golov also appears to be entirely silent with regard to reporting “*a number of times an event toggled*”, as set forth in claims 5, 13, 21, 29 and 37, or that an event is “*in a toggling condition*”, as set forth in claims 7, 15, 24, 31 and 39. Instead, the apparatus of Golov filters out toggling alarms, i.e. Golov disregards transient or toggling alarms at certain rates. This is discussed, for example, at col. 6, line 53 to col. 7, line 5 of Golov:

Thus, whereas a *fast-toggling alarm is completely filtered out* (see FIG. 8B) when both the setting and clearing of the unvalidated alarm are stretched, the *fast-toggling alarm is reported as a constant fault* when only clearing of the unvalidated alarm is stretched (FIG. 11B). An advantage of the alarm stretching algorithm is that only a single timer is required to define the time slices. Moreover, alarm stretching uses a simple algorithm for *filtering or suppressing redundant alarm messages* or alarm messages that do not require any maintenance attention. Nevertheless, the advantage of the alarm stretching algorithm is also its drawback. As illustrated in FIGS. 8A, 8B, 11A, and 11B, *a fast toggling alarm is validated as no fault at all (FIG. 8B) or as a constant fault (FIG. 11B)* depending on the particular variation of the alarm stretching algorithm that is used. Therefore, there remains a need for an alarm validation method that requires minimal resources while still being able to filter out as many redundant alarm messages as possible. (emphasis added)

Also, col. 6, line 53 to col. 7 line 5 of Golov states:

This allows the alarm integration module 70 to better handle the situation of a fast-toggling or showering input alarm as shown in FIGS. 5A and 8A. A ***fast-toggling input alarm*** will cause the integration variable X to be alternately incremented by the value of SI and then decremented by the value of CD. If the values of SI and CD are equal, and the integration variable X is currently below the value of ST, the ***output alarm will never be set to the high state to report the existence of a fault***. Conversely, if SI is greater than CD, the integration variable X will slowly climb at a rate of $(SI-CD)/2$ per time increment thus allowing the integration variable X to eventually reach the level of ST, which will cause the output alarm to be set high. (emphasis added)

The claimed invention thus treats the occurrence of a toggling alarm and the number of times an alarm toggled as important information, and reports this information to a user for fault diagnosis. The apparatus of Golov intentionally disregards this useful information.

Applicants respectfully submit therefore that Golov does not anticipate the presently pending claims. It is requested, therefore, that the rejection of claims 1-3, 5, 7-11, 13, 15-19, 21, 23-27, 29, 31-35, 37, 39 and 40 under 35 U.S.C. §102(b) as being anticipated by Golov be withdrawn upon reconsideration.

Having dealt with all the objections raised by the Examiner, it is respectfully submitted that the present application, as amended, is in condition for allowance. Early allowance is earnestly solicited.

If the Examiner desires personal contact for further disposition of this case, the Examiner is invited to call the undersigned Attorney at 603.668.6560.

In the event there are any fees due, please charge them to our Deposit Account No. 50-2121.

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